

REMARKS

Claims 1-37 are pending. Claims 8-22 and 27-36 are indicated to be allowable. The independent claims are claims 1 and 23. Independent claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by *Roy* (U.S. Patent No. 4,615,667). Independent claim 23 is rejected under 35 U.S.C. 102(b) as anticipated by *Allen* (U.S. Patent No. 3,341,644). A new copy of the specification is enclosed, as requested by the Examiner. Independent claims 1 and 23 are now amended in order to more particularly claim the invention. All of the claim amendments are supported by the specification, and no new matter is introduced.

The present claimed invention differs from the prior art references primarily in that the preform is not moved between an injection moulding station and a blow moulding station. All the operations are carried out at the same station.

In the present invention, plastics injection and introduction of pressurized gas are both carried out from the same side of the preform, which means that the parts of the mould that move do no more than define cavities. Hence, according to the present invention, it is possible to use a conventional moulding machine.

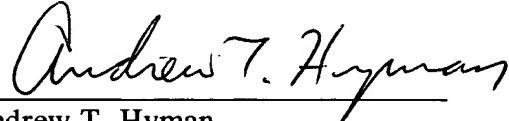
By contrast, in both *Roy* and *Allen*, the preform comes away with the core, so the latter has to be capable of more than just axial movement (for example rotatable) to carry the preform to the replacement mould. Gas has to be introduced from the core side of the preform during the blow moulding step so the movable core must also be connected to a gas supply. It must still further have a movable part to stretch the preform mechanically before the gas is introduced and lastly it must be heated because the preform will otherwise not be stretchable.

Not only does the present invention enable a conventional injection moulding machine to be used, but it reduces cycle time and is more energy efficient. Because the preform does not have to be transported, the initial mould can be opened just after a skin has formed and before it has structural rigidity (saving time). The preform does not cool down because it remains in contact with the heated base mould part (saving energy) so it is not necessary to reheat it in order to enable the stretching to take place (saving more energy).

CONCLUSION

For all of these reasons, it is not perceived how the claimed apparatus can be derived from the related art, or how the claimed apparatus might be anticipated or obvious in view of the related art. The references cited by the Examiner do not suggest what is set out in the applicant's amended claims, and do not provide the basis for developing the invention to persons having ordinary skill in the art to which the subject matter pertains. Therefore, withdrawal of the rejections is respectfully suggested, and early allowance is earnestly requested.

Respectfully submitted,

  
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Dated: May 27, 2003

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

Please Amend the Claims as Follows:

1. (Twice Amended) A method of forming a plastics material article comprising the steps of:

forming an injection moulded preform between [a pair of complementary mould parts, which define an initial mould cavity for injection of the preform] a stationary base mould part and a movable substitutable part which together define an initial mould cavity for injection of the preform,

moving the substitutable mould part after injection of plastics material into the initial mould cavity to leave the preform stationary on the base mould part,

[separating the one of the complementary mould parts (hereinafter "the Substitutable Mould Part") from the preform, replacing the Substitutable Mould Part with one or more replacement mould parts (hereinafter "the Replacement Mould Parts(s)") to enlarge the mould cavity so as to allow stretching of the preform, stretching at least part of the preform away from the other of the complementary mould parts (hereinafter "the Base Mould Part") for the forming of it to a finished article shape against the Replacement Mould Part and removing the Replacement Mould Parts(s) for release of the finish formed article.]

positioning over the preform in place of the substitutable mould part at least one replacement mould part to define a cavity larger than the initial mould cavity,

stretching at least part of the preform away from the base mould part against the replacement mould part(s) to form a finished article shape, and

removing the replacement mould part(s) in order to release the finish formed article.

23. (Amended) A tool for forming a plastics material article in accordance with Claim 1, the tool comprising:

a stationary base mould part, [a Base Mould Part, preferably a core part,]

a substitutable mould part for defining in conjunction with the stationary base part an initial mould cavity mounted for axial movement towards and away from the base mould part,

[a Substitutable Mould Part, preferably a first cavity part, the Base and Substitutable Mould Parts defining an initial mould cavity between them for injection moulding of the preform and being axially movable for separation of the Substitutable Mould Part from the preform]

an injection gate on the first mould part for controlling injection of plastics material into the initial mould cavity to produce a preform,

[one or more Replacement Mould Parts movably carried by the Base Mould Part or the Substitutable Mould Part, for movement from a withdrawn position to an advanced position in which it or they provide an enlarged mould cavity defining the outside shape of the finish formed article.]

at least one replacement mould part movably carried by the base mould part of the substitutable mould part for movement from a withdrawn position to an advanced position in which the replacement mould part(s) and the stationary base mould part together provide a cavity of greater volume than the initial mould cavity defining the outside shape of the finish formed article,

a movable piece in the base mould part for lifting a portion of the preform from the base mould part, the movable piece being adapted to seal against a main piece of the base mould part during injection moulding of the preform, and

a gas connection internally of the main piece and the movable piece of the base mould part for enable gas pressure to be applied to the side of the preform facing the base mould part to stretch the preform on to the replacement mould part(s), the gas passing through an aperture in the main piece that is opened when the movable piece is lifted.

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27. (Amended) A mould tool as claimed in [claim 26,] claim 23, wherein the movable piece has a face shaped complementarily with both the opposite face of the Substitutable Mould Part and the Replacement Mould Part(s), whereby the liftable portion of the preform is moulded to final shape in the initial mould cavity.

28. CANCEL

29. CANCEL

37. CANCEL